

WHAT IS CLAIMED IS:

1. A program execution state monitoring method using a computer for acquiring a plurality of item values associated with the program execution state at intervals linked to the items and stored in a storage device, the method comprising the steps of:

comparing a value of one of the items among the plurality of items to a condition linked to the item and stored in the storage device,

if the condition is not satisfied, modifying the interval of the item belonging to a group linked to the compared item and stored in the storage device to a value smaller than the interval, and

modifying the interval of at least one of the items not belonging to said group to a value greater than the interval.

2. A program execution state monitoring method as claimed in claim 1, the method further comprising the steps of:

storing the initial value, first and second minimum values and first and second maximum values of said interval while correlating them with the respective items associated with the program execution state,

if the interval of one of the items being acquired a value is greater than said initial value, deciding the interval of the one item so as to be equal to or greater than said first minimum value and not greater than said first maximum value linked to the one

item according to the value acquired, and

if the interval of one of the items being acquired a value is smaller than said initial value, deciding the interval of the one item so as to be equal to or greater than said second minimum value and not greater than said second maximum value linked to the one item according to the value acquired.

3. A program execution state monitoring method as claimed in claim 1, the method further comprising the steps of:

storing in a storage device an initial value, a first and a second minimum values, and a first and a second maximum values of the interval and a reference value for the variation ratio of the interval linked to the respective items associated with the program execution state,

modifying said interval of said one item to be smaller than said interval and not smaller than said first minimum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is not smaller than said reference value linked to said one item and greater than said initial value stored in said storage device,

modifying said interval of said one item to be smaller than said interval and not smaller than said second minimum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is not smaller than said

reference value linked to said one item and smaller than said initial value stored in said storage device,

modifying said interval of said one item to be greater than said interval and not greater than said first maximum value linked to said one item if an absolute value of a variation ratio of the value of said one item acquired is smaller than said reference value linked to said one item and greater than said initial value stored in said storage device, and

modifying said interval of said one item to be greater than said interval and not greater than said second maximum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is smaller than said reference value linked to said one item and smaller than said initial value stored in said storage device.

4. A program execution state monitoring method using a computer for acquiring a plurality of item values associated with the program execution state at intervals linked to the respective items and stored in a storage device, the method comprising the steps of:

comparing a value of one of the items among the plurality of items to a condition stored in the storage device,

if the condition is not satisfied, modifying the interval of each item linked to the compared item to a value smaller than the interval, and

if the value of the item associated with the

computer load is different from the condition linked to the item and stored in the storage device, modifying the interval of at least one of the items associated with the program execution state and having an interval not smaller than the initial value linked to the item and stored in the storage device to a greater value than the interval.

5. A program execution state monitoring method as claimed in claim 4, the method further comprising the steps of:

storing in a storage device an initial value, a first and a second minimum values, and a first and a second maximum values of the interval and a reference value for the variation ratio of the interval which are linked to the respective items associated with the program execution state,

modifying said interval of said one item to be smaller than said interval and not smaller than said first minimum value linked to said one item if an absolute value of a variation ratio of the value of said one item acquired is not smaller than said reference value linked to said one item and greater than said initial value stored in said storage device,

modifying said interval of said one item to be smaller than said interval and not smaller than said second minimum value linked to said one item if an absolute value of a variation ratio of the value of said one item acquired is not smaller than said

reference value linked to said one item and smaller than said initial value stored in said storage device,  
modifying said interval of said one item to be greater than said interval and not greater than said first maximum value linked to said one item if an absolute value of a variation ratio of the value of said one item acquired is smaller than said reference value linked to said one item and greater than said initial value stored in said storage device, and  
modifying said interval of said one item to be greater than said interval and not greater than said second maximum value linked to said one item if an absolute value of a variation ratio of the value of said one item acquired is smaller than said reference value linked to said one item and smaller than said initial value stored in said storage device.

6. A program execution state monitoring method using a computer for acquiring a plurality of item values associated with the program execution state at intervals linked to the respective items and stored in a storage device, the method comprising the steps of:

comparing a value of one of the plurality of items to a condition stored in the storage device, and when the condition is not satisfied and the value of the item associated with the computer load satisfies the condition linked to the item and stored in the storage device, modifying the interval of the respective items linked to the compared one item to a

smaller value than the interval.

7. A program execution state monitoring method as claimed in claim 6, wherein if the value of the item associated with the computer load does not satisfy the condition linked to the item and stored in the storage device, the interval of at least one of the items associated with the program execution state and having a value not smaller than the initial value linked to the item and stored in the storage device is modified to a greater value than the interval.

8. A program execution state monitoring method as claimed in claim 7, the method further comprising the steps of:

storing in a storage device an initial value, a first and a second minimum values, and a first and a second maximum values of the interval and a reference value for the variation ratio of the interval which are related to the respective items associated with the program execution state,

modifying said interval of said one item to be smaller than said interval and not smaller than said first minimum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is not smaller than said reference value related to said one item and greater than said initial value stored in said storage device,

modifying said interval of said one item to be smaller than said interval and not smaller than said

second minimum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is not smaller than said reference value related to said one item and smaller than said initial value stored in said storage device,

modifying said interval of said one item to be greater than said interval and not greater than said first maximum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is smaller than said reference value related to said one item and greater than said initial value stored in said storage device, and

modifying said interval of said one item to be greater than said interval and not greater than said second maximum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is smaller than said reference value related to said one item and smaller than said initial value stored in said storage device.

9. A program execution state monitoring method using a computer for acquiring a plurality of item values associated with the program execution state at intervals related to the respective items and stored in a storage device, the method comprising the steps of:

comparing a value of one of the items among the plurality of items to a condition stored in the storage device, and

when the condition is not satisfied and the

number of items related to the item compared is equal to or smaller than a predetermined value, modifying the interval of the respective items related to the compared one item to a smaller value than the interval.

10. A program execution state monitoring method using a computer for acquiring a plurality of item values associated with the program execution state at intervals related to the respective items and stored in a storage device, the method comprising the steps of:

storing in the storage device a group consisting of at least one of the plurality of items related to the respective items,

when one of the plurality of items does not satisfy the condition related to the item and stored in the storage device and there is a group related to an item different from the one item and including items whose intervals are smaller than the initial value set for the intervals, modifying the intervals of the respective items to the initial values, and

modifying the interval of each of the items belonging to the group related to the one item to a value smaller than the interval.

11. A program execution state monitoring method using a plurality of computers connected in such a manner that they can communicate with one another for acquiring a plurality of item values associated with execution states of a program executed on the computers at intervals related to the respective items and

stored, the method comprising the steps of:

comparing a value acquired for one of the plurality of items to a condition related to the one item and stored by one of the plurality of computers,

if the value does not satisfy the condition, extracting the item related to the one item and stored in a storage device and at least one of items not related to the one item by said one computer or another computer,

modifying the interval related to the extracted item related to the one item and stored in the storage device to an interval smaller than the interval stored by said one computer or another computer different from it, and

modifying the interval related to the extracted item not related to the one item and stored in the storage device to an interval greater than the interval stored by said one computer or another computer different from it.

12. A program for executing a program execution state monitoring method using a computer for acquiring a plurality of item values associated with the program execution state at intervals related to the respective items and stored in a storage device, the method comprising the steps of:

comparing a value of one of the plurality of items to a condition stored in the storage device,

if the condition is not satisfied, modifying

the interval of the respective items related to the compared item to a value smaller than the interval, and modifying the interval of at least one of the items different from the aforementioned items related to the compared item to a value greater than the interval.

13. A program as claimed in claim 12, wherein the program further includes the codes for executing the steps of:

storing in a storage device an initial value, a first and a second minimum values, and a first and a second maximum values of the interval and a reference value for the variation ratio of the interval which are related to the respective items associated with the program execution state,

modifying said interval of said one item to be smaller than said interval and not smaller than said first minimum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is not smaller than said reference value related to said one item and greater than said initial value stored in said storage device,

modifying said interval of said one item to be smaller than said interval and not smaller than said second minimum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is not smaller than said reference value related to said one item and smaller

than said initial value stored in said storage device,  
modifying said interval of said one item to  
be greater than said interval and not greater than said  
first maximum value related to said one item if an  
absolute value of a variation ratio of the value of  
said one item acquired is smaller than said reference  
value related to said one item and greater than said  
initial value stored in said storage device, and

modifying said interval of said one item to  
be greater than said interval and not greater than said  
second maximum value related to said one item if an  
absolute value of a variation ratio of the value of  
said one item acquired is smaller than said reference  
value related to said one item and smaller than said  
initial value stored in said storage device.

14. A program for executing a program execution state monitoring method using a computer for acquiring a plurality of item values associated with the program execution state at intervals related to the respective items and stored in a storage device, the method comprising the steps of:

comparing a value of one of the items among the plurality of items to a condition stored in the storage device,

if the condition is not satisfied, modifying the interval of each item related to the compared item to a value smaller than the interval, and

if the value of the item associated with the

computer load is different from the condition related to the item and stored in the storage device, modifying the interval of at least one of the items associated with the program execution state and having an interval not smaller than the initial value related to the item and stored in the storage device to a greater value than the interval.

15. A program as claimed in claim 14, wherein the program further includes the codes for executing the steps of:

storing in a storage device an initial value, a first and a second minimum values, and a first and a second maximum values of the interval and a reference value for the variation ratio of the interval which are related to the respective items associated with the program execution state,

modifying said interval of said one item to be smaller than said interval and not smaller than said first minimum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is not smaller than said reference value related to said one item and greater than said initial value stored in said storage device,

modifying said interval of said one item to be smaller than said interval and not smaller than said second minimum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is not smaller than said

reference value related to said one item and smaller than said initial value stored in said storage device,

modifying said interval of said one item to be greater than said interval and not greater than said first maximum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is smaller than said reference value related to said one item and greater than said initial value stored in said storage device, and

modifying said interval of said one item to be greater than said interval and not greater than said second maximum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is smaller than said reference value related to said one item and smaller than said initial value stored in said storage device.

16. A program for executing a program execution state monitoring method using a computer for acquiring a plurality of item values associated with the program execution state at intervals related to the respective items and stored in a storage device, the method comprising the steps of:

comparing a value of one of the plurality of items to a condition stored in the storage device, and

when the condition is not satisfied and the value of the item associated with the computer load satisfies the condition related to the item and stored in the storage device, modifying the interval of the

respective items related to the compared one item to a smaller value than the interval.

17. A program as claimed in claim 16, wherein if the value of the item associated with the computer load does not satisfy the condition related to the item and stored in the storage device, the interval of at least one of the items associated with the program execution state and having a value not smaller than the initial value related to the item and stored in the storage device is modified to a greater value than the interval.

18. A program as claimed in claim 17, wherein the program further includes the codes for executing the steps of:

storing in a storage device an initial value, a first and a second minimum values, and a first and a second maximum values of the interval and a reference value for the variation ratio of the interval which are related to the respective items associated with the program execution state,

modifying said interval of said one item to be smaller than said interval and not smaller than said first minimum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is not smaller than said reference value related to said one item and greater than said initial value stored in said storage device,

modifying said interval of said one item to

be smaller than said interval and not smaller than said second minimum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is not smaller than said reference value related to said one item and smaller than said initial value stored in said storage device,

modifying said interval of said one item to be greater than said interval and not greater than said first maximum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is smaller than said reference value related to said one item and greater than said initial value stored in said storage device, and

modifying said interval of said one item to be greater than said interval and not greater than said second maximum value related to said one item if an absolute value of a variation ratio of the value of said one item acquired is smaller than said reference value related to said one item and smaller than said initial value stored in said storage device.

19. A program for executing a program execution state monitoring method using a computer for acquiring a plurality of item values associated with the program execution state at intervals related to the respective items and stored in a storage device, the method comprising the steps of:

comparing a value of one of the items among the plurality of items to a condition stored in the

storage device, and

when the condition is not satisfied and the number of items related to the item compared is equal to or smaller than a predetermined value, modifying the interval of the respective items related to the compared one item to a smaller value than the interval.

20. A program for executing a program execution state monitoring method using a computer for acquiring a plurality of item values associated with the program execution state at intervals related to the respective items and stored in a storage device, the method comprising the steps of:

storing in the storage device a group consisting of at least one of the plurality of items related to the respective items,

when one of the plurality of items does not satisfy the condition related to the item and stored in the storage device and there is a group related to an item different from the one item and including items whose intervals are smaller than the initial value set for the intervals, modifying the intervals of the respective items to the initial values, and

modifying the interval of each of the items belonging to the group related to the one item to a value smaller than the interval.